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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,572	11/06/2003	Ychuda Ccm	2147.014USU	8735

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EXAMINER
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NGUYEN, NAM V

ART UNIT	PAPER NUMBER
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2612

MAIL DATE	DELIVERY MODE
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09/19/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/702,572

Applicant(s)

CERN, YEHUDA

Examiner

Nam V. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 6/28/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-12 and 15-20 is/are rejected.
- 7) ☒ Claim(s) 3,4,13 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This communication is in response to applicant's Amendment after non-final rejection which is filed June 28, 2007.

An amendment to the claims 1-11, 13-14 and 18-19 has been entered and made of record in the application of Cern for a "controlling power output of a modem for power line communications" filed November 6, 2003.

Claims 1-20 are now pending in the application.

### ***Response to Arguments***

In view of applicant's amendment to amend the claims 1-10 to obviate the §101 rejections and the claims 8-9 and 18-19 to obviate the rejection under 35 U.S.C §112, second paragraph, therefore, examiner has withdrawn the rejection under 35 U.S.C §101 and the rejection under 35 U.S.C §112, second paragraph.

Applicant's arguments with respect to claims 1-11, 13-14 and 18-19, filed June 28, 2007 have been fully considered but are moot in view of the new ground(s) of rejection.

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6, 7, 11 and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Gander (US# 4,371,867).

Referring to claims 1 and 11, Gander discloses a method and an apparatus (column 1 lines 15 to 26; see Figure 1) comprising:

A transmitting device for providing an output to a power line in a power line communication system (column 2 lines 55 to column 3 line 9; column 7 lines 8 to 29; column 8 lines 16 to 44; see Figures 3 and 6);

a voltage detector (12) or current detector (3) for sensing a voltage/current of said output (column 3 lines 52 to 66; column 8 lines 24 to 44; see Figures 2-7); and

a control unit (6) for adjusting a power of said output based on a value of said voltage/current (column 3 lines 26 to column 4 line 38).

Referring to claims 6 and 16, Gander discloses a method and the system of Claim 1 and 11, wherein said parameter comprises a signal current in said power line (column 3 lines 26 to

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39; see Figures 2 and 6).

Referring to claims 7 and 17, Gander discloses a method and the system of Claim 1 and 11, wherein said parameter comprises a signal voltage in said power line (column 3 lines 52 to 66; see Figure 3).

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5, 10, 12, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gander (US# 4,371,867) in view of Bullock et al. (US# 6,515,485).

Referring to claims 2 and 12, Gander discloses a method and the system of Claim 1 and 11, however, Gander did not explicitly disclose wherein said controller maximizes said power while limiting said power to a predetermined level of electromagnetic radiation.

In the same field of endeavor of a power line communication system, Bullock et al. teach that a controller maximizes said power while limiting said power to a predetermined level of electromagnetic radiation (column 1 lines 50 to 53; column 2 line 61 to column 3 line 14; see Figures 1 to 3) in order to maximize power transfer to and from the power line.

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At the time of the invention, it would have been obvious to a person of ordinary skill in the art to recognize using a level detection to sense the level of an outputted signal to measure impedance matching to maximize power transfer to a predetermined level taught by Bullock et al. in a transmitting unit of Gander because using the level detection to sense the level of the outputted signal to a maximum would maximize transfer power by impedance matching in the power line communication.

Referring to claims 5 and 15, Gander discloses a method and the system of Claim 1 and 11, Bullock et al. discloses wherein said parameter comprises an electromagnetic radiation (column 1 lines 50 to 53; column 2 line 61 to column 3 line 14; see Figures 1 to 3).

Referring to Claims 10 and 20, Gander discloses a method and the system of Claim 1 and 11, Bullock et al. discloses wherein said output produces an electromagnetic radiation intensity from said power line, wherein said parameter and said electromagnetic radiation form a ratio, and wherein said controller adjusts said power to compensate for variations in said ratio over a transmitter frequency band of said modem (column 2 lines 26 to 40).

Claims 8-9 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gander (US# 4,371,867) as applied to claims 1 and 11 and further in view of Gorecki (US# 4,556,866).

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Referring to claims 8-9 and 18-19, Gander discloses a method and the system of Claim 1 and 11, however, Gander did not explicitly disclose a phase detector that receives an input indicative of said output voltage and an input indicative of said output current.

In the same field of endeavor of a power line communication system, Gorecki teach that a phase detector (40) in a phase locked loop (38) of the real component (column 4 lines 50 to 67; see Figures 1-2A) in order to provide a control signal to a voltage control oscillator for producing a timing signals.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to recognize using a phase detector to lock to the rising edges of the real component taught by Gorecki in a transmitter with a tuning device Gander because using a phase detection to produce the timing signal and synthesize power carrier signal would provide a reliable signal output during transmission.

### *Allowable Subject Matter*

Claims 3-4 and 13-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Referring to claims 3 and 13, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations wherein said output includes a first frequency sub-band and a second frequency sub-band, and wherein said controller adjusts

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said power to a first power for said first frequency sub-band and a second power for said second frequency sub-band.

Referring to claims 4 and 14, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations wherein said modem provides said output by sequentially transmitting over a first frequency sub-band and a second frequency sub-band, and wherein said controller adjusts-a said power to a first power for said first frequency sub-band and a second power for said second frequency sub-band.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Linder (US# 4,543,540) discloses a phase locked loop with limited phase correction when in locked condition.

Hasegawa (US# 4,641,322) discloses a system for carrying out spread spectrum communication through an electric power line.

Ise et al. (US# 4,745,392) disclose a noise reduction in signal transmission system over building power distribution wiring.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam V Nguyen whose telephone number is 571-272-3061. The examiner can normally be reached on Mon-Fri, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman can be reached on 571- 272-3059. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nam Nguyen  
September 13, 2007



**BRIAN ZIMMERMAN**  
**PRIMARY EXAMINER**